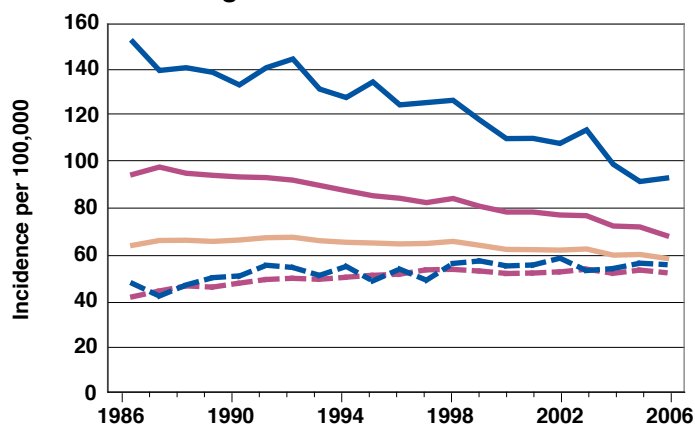# Incidence and Mortality Rate Trends

Lung cancer is the second most common cancer and the most common cause of cancer-related death in both men and women in the United States. The overall mortality rate for lung and bronchus cancer rose steadily through the 1980s and peaked around 1993. Although incidence and mortality rates for men have dropped in the past decade, a similar trend has not occurred in women. Mortality rates are highest among African American males, followed by white males.

It is estimated that approximately $9.6 billion[1] is spent in the United States each year on treatment of lung cancer.

Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts are available at http://seer.cancer.gov/.

[1]Cancer Trends Progress Report (http://progressreport.cancer.gov), in 2004 dollars, based on methods described in *Medical Care* 2002 Aug;40(8 Suppl):IV-104-17.

U.S. Lung and Bronchus Cancer Incidence

U.S. Lung and Bronchus Cancer Mortality

Legend:
- White Males
- White Females
- Overall Rate
- African American Males
- African American Females
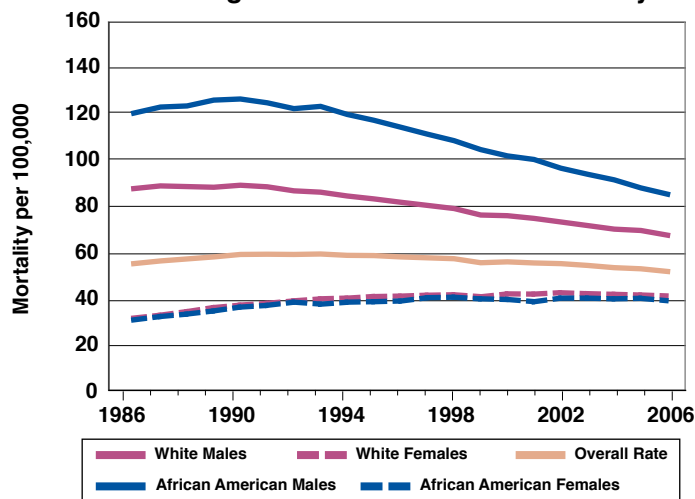
Trends in NCI Funding for Lung Cancer Research

The National Cancer Institute's (NCI) investment[2] in lung cancer research decreased from $276.5 million in fiscal year 2004 to $247.6 million in fiscal year 2008.

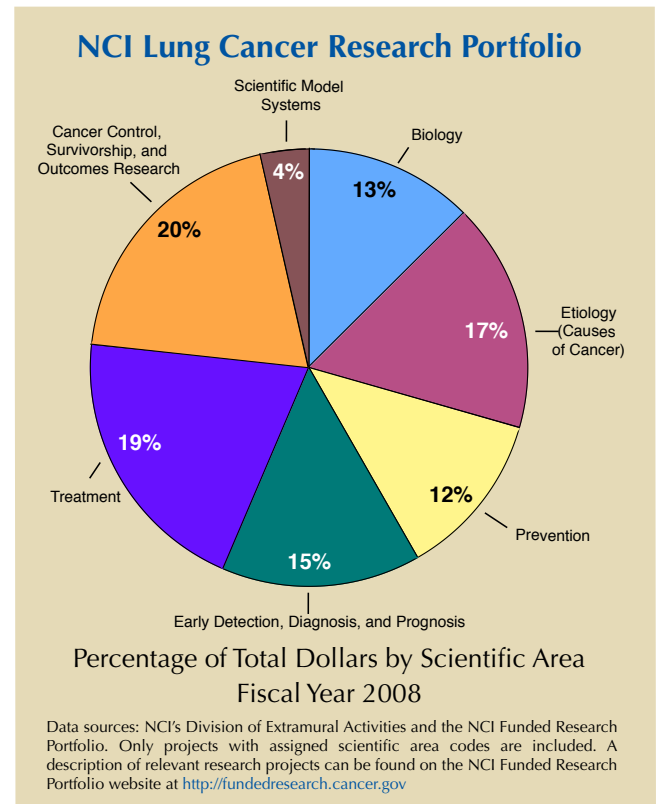Source: NCI Office of Budget and Finance (http://obf.cancer.gov).

[2]The estimated NCI investment is based on funding associated with a broad range of peer-reviewed scientific activities. For additional information on research planning and budgeting at the National Institutes of Health (NIH), see http://www.nih.gov/about/.

NCI Lung Cancer Research Investment

Legend:
- Lung Cancer Funding
- Total NCI Budget
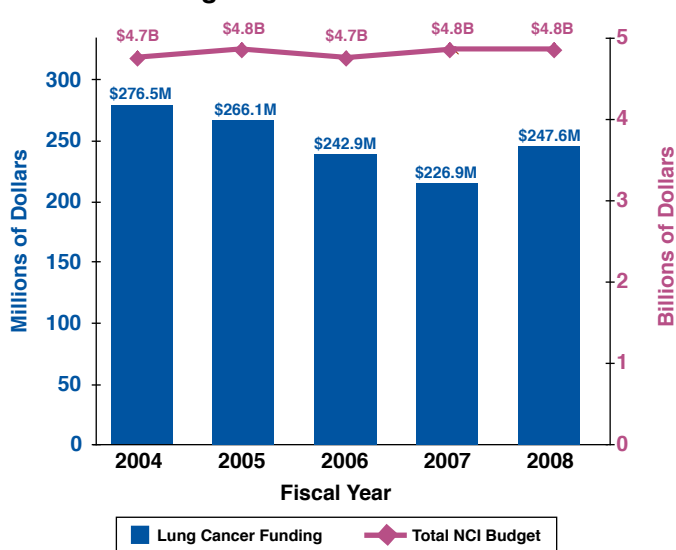
Examples of NCI Activities Relevant to Lung Cancer

- Seven lung cancer-specific **Specialized Programs of Research Excellence (SPOREs)** are promoting interdisciplinary research and moving basic research results from the laboratory to the clinical setting. http://spores.nci.nih.gov/current/lung/index.htm

- The **Lung and Aerodigestive Cancer Faculty** fosters collaboration among NCI researchers, identifies and shares resources to support member research, enhances interactions with other investigators, collaborates with the lung SPOREs, and fosters participation in clinical trials. http://ccr.cancer.gov/faculties/faculty.asp?facid=133

- **The Cancer Genome Atlas (TCGA)** is assessing the feasibility of systematically identifying the major genomic changes involved in cancer using state-of-the-art genomic analysis technologies. Lung cancer is one of the first cancer types to be studied in the TCGA pilot phase. http://cancergenome.nih.gov/wwd/pilot_program/

- The primary aim of the **National Survey of Primary Care Physicians' Recommendations and Practice for Breast, Cervical, Colorectal, and Lung Cancer Screening** is to characterize physicians' knowledge, attitudes, recommendations, and practices related to screening for lung and other cancers. http://healthservices.cancer.gov/surveys/screening_rp/

- The **Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial** is determining whether certain cancer screening tests reduce deaths from prostate, lung, colorectal, and ovarian cancers. http://dcp.cancer.gov/programs-resources/groups/ed/programs/plco

- The **Mouse Models of Human Cancers Consortium (MMHCC)** is developing models of lung cancer to aid in our understanding of lung tumor biology and to facilitate the development and testing of novel therapeutic approaches and methods for early diagnosis. http://emice.nci.nih.gov/mouse_models/organ_models/lung_models

NCI Lung Cancer Research Portfolio

Scientific Model Systems
Biology 13%
Etiology (Causes of Cancer) 17%
Prevention 12%
Early Detection, Diagnosis, and Prognosis 15%
Treatment 19%
Cancer Control, Survivorship, and Outcomes Research 20%
4%

Percentage of Total Dollars by Scientific Area
Fiscal Year 2008

Data sources: NCI's Division of Extramural Activities and the NCI Funded Research Portfolio. Only projects with assigned scientific area codes are included. A description of relevant research projects can be found on the NCI Funded Research Portfolio website at http://fundedresearch.cancer.gov

- The **Lung Cancer Biomarkers Group** is developing sets of specimens that can be used to test biomarkers for the early detection or diagnosis of lung cancer. http://grants.nih.gov/grants/guide/notice-files/NOT-CA-07-016.html

- The **What You Need to Know About™ Lung Cancer** booklet provides information about lung cancer diagnosis, staging, treatment, and comfort care. Information specialists can also answer questions about cancer at 1-800-4-CANCER. http://www.cancer.gov/cancertopics/wyntk/lung

- The **Lung Cancer Home Page** provides up-to-date information on lung cancer treatment, prevention, genetics, causes, screening, testing, and other topics. http://www.cancer.gov/lung

Selected Advances in Lung Cancer Research

- Researchers reported that up to one third of patients might get a **false positive result on a computed tomography (CT) lung cancer screen**. http://www.cancer.gov/ncicancerbulletin/060209/page3

- A genome-wide association study identified **several genes associated with smoking behavior**. http://www.ncbi.nlm.nih.gov/pubmed/19247474

- Measuring **metabolism of the amino acid tryptophan in non-small cell lung tumors** might be helpful for developing a personalized cancer treatment. http://www.ncbi.nlm.nih.gov/pubmed/19223408

- A comprehensive study found that **depiction of smoking in the movies and cigarette advertising in the media** lead to increased tobacco use. http://www.cancer.gov/ncicancerbulletin/NCI_Cancer_Bulletin_092308/page4